



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/673,435

10/18/2000

Herbert Heiss

P00,1528

8860

7590

03/30/2005

KEVIN R. SPIVAK  
MORRISON & FOERSTER LLP  
2000 PENNSYLVANIA AVENUE, N.W.  
WASHINGTON, DC 20006-1888

EXAMINER

LEVITAN, DMITRY

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/673,435

Applicant(s)

HEISS ET AL.

Examiner

Dmitry Levitan

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/12/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 18-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-24, 26-29, 31, 32 and 35 is/are rejected.
- 7) ☒ Claim(s) 25, 30, 33 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/12/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Applicant amendment, filed 11/12/04 has been entered. Claims 18-35 remain pending.

***Drawings***

1. The drawings were received on 11/12/04. These drawings are not approved.
2. The drawings are objected to because the mark ups on the original drawings are not understood. Examiner believes that the pseudocode of the original drawings separated in boxes does not produce a flowchart or a process diagram. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. Claims 18-24, 26-29, 31, 32 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Nattkemper (US 6,754,206).

Art Unit: 2662

4. Regarding claims 18 and 35, Nattkemper teaches a method of removal of ATM cells from an ATM communication device (switching subsystem 100 communicating with ATM switch 12 on Fig. 1 and 3:55-60 discarding selective ATM cells 4:20-25), comprising:

Providing a plurality of ATM cells, a plurality in each case assigned to a common frame (part of PPD process 15:1-7, as PPD discards cells from a common frame) and which are stored in connection-specific queues (streams classified into different queues 14:40-54),

Providing a first algorithm, which removes, with exception of the first and last ATM cell in a frame, all newly arriving cells in the frame (implementing partial packet discard process PPD 15:1-30, wherein all frame subsequent cells are dropped with exception of the first and the last ATM cells),

Providing a second algorithm, which removes all from a first cell to the last cell, upon their arrival in a queue from ATM communication device (implementing early packet discard process EPD 15:1-30, wherein all frame cells are dropped),

At a start of a transmission process, indicating by a user a maximum number of ATM cells per frame and transmitting the ATM calls using said maximum number (switching system 100 utilizes certain thresholds to indicate congestion 14:15-53), and

when said maximum number is exceeded, discarding the associated frame or using the first algorithm (during congestion certain cells are discarded using early or partial discard techniques 15:1-15).

5. Regarding claim 19, Nattkemper teaches controlling a length of the queue on a connection specific basis (defining buffer capacity on a type of a stream 17:55-67 and 18:1-17).

Art Unit: 2662

6. Regarding claim 20, Nattkemper teaches using a constant value per connection, which is a measure of a maximum frame size of the connection (using a single fixed size buffer during system run-time 27:30-37).
7. Regarding claim 21, Nattkemper teaches storing per connection, a number of the cells which arrived for said connection since an end of the last frame for said connection (In absence of congestion, when no levels of table 10:30-53 are triggered, all ingress cells are enqueued to their respective queues 10:54-67 and 12:1-15).
8. Regarding claim 22, Nattkemper teaches storing no high-priority cells for a connection if a length of the queue for said connection is equal to a value which is independent of said connection and which represents a measure for a fixed upper limit for the queue (discarding the cells coming into the queue, when the queue reaches its occupancy limit 49:15-50).
9. Regarding claim 23, Nattkemper teaches if high priority frames do not exceed the maximum number of cells per frame, the first algorithm is not used for the frame (if higher priority traffic classes remain within the limit, packet discard would not be used 15:1-20).
10. Regarding claim 24, Nattkemper teaches a specific portion of the buffer store is reserved for high priority cells per connection and low priority cells are not given any access to said specific portion of the store (certain buffers are reserved for high priority streams only, CBR and VBR 21:1-30).
11. Regarding claims 26 and 27, Nattkemper teaches completely discarding high priority frames if, on arrival of a first cell of a connection, or on arrival of a cell which is neither first or last cell in a frame, less than maximum number of cells per frame MFS remains in a logic queue for this connection, or the logic queue exceeds a threshold and a status of a buffer store indicates

Art Unit: 2662

that high priority frames should be discarded, where MFS stands for maximum frame size (when the queue reaches its occupancy limit, the cells coming into the queue are discarded, 49:15-50)

12. Regarding claim 28, Nattkemper teaches completely discarding low priority frames on arrival of a first cell of the connection, a length of the queue for this connection is greater than a variable S PPD-I the length of the queue is longer than a value S EPD-I and a status buffer store indicates that low priority frames should be discarded (all cells going to the low priority queue are discarded when it is considered to be in the L3 congestion mode, when the length of the queue exceeds a threshold 10:30-54 and 12:1-15).

13. Regarding claim 29, Nattkemper teaches discarding some low priority frames for a connection on arrival of a cell which is neither a first nor a last cell in a frame, a length of the queue for said connection is greater than variable S-PPD-I-1 or the length of a queue is greater than a variable S-PPD-I and a status of the buffer store indicates that low priority cells should be discarded or if the frame is longer than the maximum number of cells for the frame size (all cells going to the low priority queues are discarded at the L3 congestion mode, when the length of the queue exceeds a threshold, 10:30-54 and 12:1-15).

14. Regarding claims 31 and 32, Nattkemper teaches when filling level of a buffer store is low, high priority frames and low priority frames whose first cell has been transferred and whose frame length does not exceed the maximum number of cells per frame are not subject to the first algorithm (when no levels are triggered, then all ingress cells are enqueued to the buffer attachments, 10:54-67 and 12:1-15).

***Allowable Subject Matter***

15. Claims 25, 30, 33 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

16. Applicant's arguments filed 11/12/04 have been fully considered but they are not persuasive.

On page 3 of the Response, Applicant argues that Nattkemper reference US 6,754,206 is not appropriate prior art, because of its filing date (Jul 23, 1999).

Examiner respectfully disagrees.

US 6,754,206 is a continuation of the application 08/985,386, filed on Dec 4, 1997, now patent US 5,999,518. Continuation contains the same disclosure and drawings as the original application, making the effective filing date of the continuation the same as of the original application (Dec 4, 1997).

On page 3 of the Response, Applicant argues that Nattkemper reference does not teach a first algorithm removing all new arriving cells with the exception of a first and a last ATM cell in a frame.

Examiner respectfully disagrees.

Art Unit: 2662

Nattkemper teaches using a partial packet discard process (PPD on 15:1-30), the process that discards all the cells from a frame with a defective cell, except of a first and a last ATM cell in a frame.

On page 3 of the Response, Applicant argues that Nattkemper reference does not teach a second algorithm removing all new arriving cells upon their arrival from the ATM communication device.

Examiner respectfully disagrees.

Nattkemper teaches using an early packet discard process (EPD on 15:1-30), the process that discards all the cells from a frame upon their arrival from the ATM communication device.

Examiner therefore believes that the cited references meet all the claims limitations and the rejection is proper.

### ***Conclusion***

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37



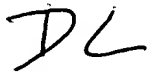
Art Unit: 2662

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dmitry Levitan  
Patent Examiner.  
03/18/05



**HASSAN KIZOU**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**